REMARKS/ARGUMENTS

Claims 1-19 are active.

Support for the amendment to Claim 1 is found in the Examples where evolution of gas commenced at 100 to 110°C and the reaction further progressed at temperatures of 120 to 150°C (see table 1). That is, by disclosing the end points of the recited ranges, possession of the range is present, see, examples at 35% and 50% support a range of 35-50%, *In re Wertheim*, 541 F.2d 257 (CCPA 1976).

No new matter is added.

The new rejection of Claims 1-3, 5-9, 11-12, 15 and 17-20 as being obvious over Rannard et al. (GB 2 324 797) in view of Osterloh et al. (US 4,713,440) and Gerkin et al cannot be sustained.

The finds that Rannard teaches a reaction to produce functionalized, branched, polyureas but Rannard does not teach urea other than CDI. See Action bridging pages 3-4.

The Examiner finds and concludes that "additionally, one of ordinary skill would have a reasonable expectation of success in substituting the CDI of Rannard et al. for the urea of Osterloh et al., since Gerkin et al. teach in column 3, lines 15-19 that urea and CDI are suitable equivalents when reacted with polyamine." Action at page 4.

The Examiner also finds that "the newly presented rejection presents prior art - Gerkin et al. (US 5,364,924) - that establishes a reasonable expectation of success in substituting CDI for urea when reacting with polyamine systems." Action bridging pages 8-9 of the Action.

The significance of the Examiner's statements can be understood only when it is considered in light of the wealth of clearly erroneous findings which immediately precede it.

First, Gerkin does not teach that urea and CDI are "equivalent" as suggested in the Action. In fact, nowhere does Gerkin use the term "equivalent" in col. 3. Rather, Gerkin

simply teaches that various materials can be used to prepare the subject of the invention (substituted ureas) and thus they are alternatives but not necessarily equivalents as alleged in the rejection. Accordingly, the entirety of the rejection presupposes a fact or teaching that is not found in the underlying prior art and as such the rejection cannot be sustained for at least this reason alone.

Also, as explained previously and described in the IMD Article, previously made of record, (See also the Feast Article, previously made of record) that describes, in the Introduction, that CDI is "an analogue of phosgene…)." Ureas, as a genus, are not "analogs of phosgene" and do not have "a reactivity that is similar to that of acid chlorides."

Accordingly, one of ordinary skill in the art would not be motivated to substitute the phosgene equivalent CDI, or the highly reactive thiocarbonyldiimidazole, both reactants of Rannard, with the significantly less reactive urea, thiourea, or combination thereof as described in the Markush group of present Claim 1 (and indirectly dependent Claim 16) because doing so would be expected to either produce no product or significantly decrease the amount of product produced while significantly increasing reaction time.

At least on this basis as well, the rejection cannot be sustained.

Still further, Gerkin et al. does not provide motivation to substitute CDI with urea and to carry out the reaction *at a temperature of from 100 to 150 °C.*

Gerkin et al. describes the preparation of bis(3,5-dimethylpiperazinyl)urea (DMPU) from 2,6-dimethylpiperazine (DMP) and both urea (2nd example) and CDI (3rd example). According to the 2nd example, a mixture of DMP and urea was stirred and heated at temperatures from 160 to 200 °C for 3 hours and analyzed by gas chromatography, which showed a peak having the same retention time as authentic bis(3,5-dimethylpiperazinyl)urea. Gerkin describes that the desired product DMPU was only formed in minor amounts. As it

was detected via a peak in the gas chromatogram of the product mixture, and not isolated as pure product.

According to the 3rd example, a mixture of DMP and CDI was heated at 161 to 181 °C. The product was distilled, giving fractions including some fractions which were substantially pure DMPU. The examples further state that in an earlier preparation based on a reaction of DMP and CDI, the product was analyzed and the major product was identified as the expected DMPU.

Thus, Gerkin et al. teaches and suggests using the reaction between DMP and CDI to produce DMPU in quantitive amounts. When urea is used instead of DMPU according to the 2nd example, only minor amounts of DMPU are formed, which are identifiable by gas chromatography - no isolation of the pure product is reported. Furthermore, Gerkin et al. clearly teaches to conduct the reaction at least at 160 °C. Thus, one following GErkin's teaching would be taught away from performing a reaction between an amine and urea at the lower temperatures of from 100 to 150 °C, as defined in amended Claim 1.

Reconsideration and withdrawal of the rejection is requested.

The second obviousness rejection applied against Claims 12-15 further in view of D'Alelio is not sustainable either. The rejection posits that D'Alelio compensates for the deficiencies of Rannard, Osterloh and Gerkin in terms of the catalysts. However, even with D'Alelio, the combined teachings of these citations do not teach that CDI and urea are equivalent, do not provide contrary teachings to the differences between CDI and urea reactivities, and do not teach or suggest the temperature at which the claimed process is to be conducted. Reconsideration and withdrawal of the rejection is requested.

The third obviousness rejection applied against Claim 16 posits that distilling, while not disclosed or suggested by Rannard, Osterloh and Gerkin would nonetheless have been obvious. However, the combined teachings of these citations do not teach that CDI and urea are equivalent, do not provide contrary teachings to the differences between CDI and urea reactivities, and do not teach or suggest the temperature at which the claimed process is to be conducted. Reconsideration and withdrawal of the rejection is requested.

The fourth obviousness rejection applied against Claims 12, 15, 17 and 21 citing Rannard, Osterloh and Gerkin further in view of Rannard non-patent literature to contend that a reaction temperature of 60°C would have been obvious. The claimed temperature range in amended Claim 1 is 100 to 150 °C and therefore this combination of art does not provide salient teachings as to this limitation in addition to the fact that these citations do not teach that CDI and urea are equivalent and do not provide contrary teachings to the differences between CDI and urea reactivities. Reconsideration and withdrawal of the rejection is requested.

A Notice of Allowance for all pending claims is requested.

Respectfully submitted,

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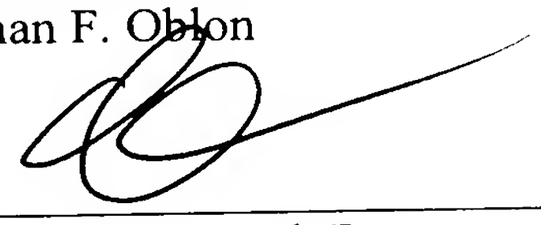

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